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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,593	12/13/2001	Kamakshi Sridhar	1285-0079US	6574

24587 7590 04/04/2006

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EXAMINER	
FERRIS, DERRICK W	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,593	SRIDHAR, KAMAKSHI	
	Examiner	Art Unit	
	Derrick W. Ferris	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-13,15-21 and 23* is/are rejected.

7)☒ Claim(s) *6,14 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/19/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. This Office action is in response to applicant's paper filed 2/15/2006. **Claims** 1-23 as originally presented.

2. The examiner **withdraws** the objection to the specification and thanks applicant for making the necessary corrections.

3. Examiner does **not withdraw** the anticipated rejection to ***Barcheshet*** and corresponding obviousness rejections. The following comments fully address applicant's arguments with respect to the rejection. Applicant's arguments filed 2/15/2006 have been fully considered but they are not persuasive. In particular, applicant contests the priority of the provisional application for *Barcheshet*. The examiner has included a copy of the provisional application per applicant's request. In addition, the examiner has verified support for priority for the provisional application. Also, applicant argues that *how* any parameters are used and in particular that the further limitations of *changing* (1) Bandwidth Broker parameters and (2) QoS parameters at the node is not taught by the reference. The examiner respectfully disagrees. Changing a route is construed as load balancing given a reasonable but broad interpretation of the recited claimed subject matter in view of applicant's specification. In addition, *Barcheshet* also explicitly teaches load balancing, see e.g., page 3, paragraph 0037. As such, *Barcheshe* teaches obtaining constraint information at each node where constraint information further includes (1) Bandwidth Broker parameters and (2) QoS parameters, see e.g., Table II and Table II on pages 4 and 5 of *Barcheshet* respectively (Tables 1 and 2 on page 6 of the provisional application). Furthermore, 5 traffic engineering metrics are a type of QoS metric since they are used to engineer the traffic for

"performance optimization", see e.g., paragraph 0008 on page 1. In particular, applicant's remarks filed 2/15/2006 provide no reasoning on why traffic engineering parameters are not QoS parameters. However, applicant's specification defines QoS as affecting *the performance of traffic* already on the ring, see paragraph 0015 on page 8 of applicant's specification. As mentioned above, *Barcheshe* teaches that traffic engineering parameters are used for performance optimization (emphasis added). Once the constraint information is determined, the information is propagated to all nodes in the network in the form of TLV advertisements see e.g., paragraphs 0055 and 0056 on page 4. Thus the parameters are changed when they are determined since each node in the network is aware of that nodes particular constraint information, see e.g., paragraph 0057 on page 4. Furthermore, how a parameter is changed is not further recited in the claim. Once a node receives the advertisements for every node on the network, the node then uses the information (i.e., uses the constraint information) to choose a routing path for a new flow (i.e., causes flows to be diverted and improve traffic performance as claimed). In particular, a node will choose its routing paths based on any applicable considerations including balancing service differentiation. Balancing service differentiation includes directing flows from a heavily loaded one of the rings to a less heavily loaded one of the rings and increasing bandwidth utilization on the less heavily loaded one of the rings, see e.g., paragraphs 0008 on page 1 and paragraph 0017 on page 2. Thus the above claim limitations are met for the cited reference.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 4-5, 8, 12, 13, 16, and 21** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application 2003/0103449 A1 to *Barsheshet et al.* ("*Barsheshet*").

As to **claim 1**, *Barsheshet* teaches a resilient packet ringed network, see e.g., paragraph 0026 that performs load balancing, see e.g., paragraph 0037 on page 3. Since *Barsheshet* teaches load balancing, *Barsheshet* teaches determining whether a load imbalance exists at the node in connection with a first class of service. In particular, *Barsheshet* teaches that a system operator may use constraints to impose explicit routes, see e.g., paragraph 0054 on page 4 where the constraints include traffic-engineering descriptors, see e.g., Table II on page 4 and Table 3 on page 5. Included in the table are descriptors that read on Bandwidth Broker parameters, see e.g., the variable maximum bandwidth, and Quality of Service Parameters, see e.g., traffic engineering metrics. Thus in routing flows, the parameters are changed such that Bandwidth Broker parameters are changed at a node for a first class of service to cause new flows to be diverted from a more heavily loaded one of the rings to a less heavily loaded one of the rings and QoS parameters are changed at the node for the first class of service to improve traffic performance on the more heavily loaded one of the rings, while increasing utilization on the less heavy loaded one of the rings.

As to **claim 4**, the node monitors the traffic parameters which a system operators uses to determine the parameters.

As to **claim 5**, by setting the bandwidth parameters for a class of service the bandwidth is either increased or decreased on a ring respectively.

As to **claim 8**, see similar rejection to claim 1.

As to **claim 12**, see similar rejection to claim 4.

As to **claim 13**, see similar rejection to claim 5.

As to **claim 16**, see similar combined rejections to claims 1 and 5.

As to **claim 21**, see similar rejection to claim 5.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 2-3, 9-11, 17, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2003/0103449 A1 to *Barsheshet et al.* ("*Barsheshet*") in view of U.S. Patent Application 2003/0048754 A1 to *Bruckman*.

As such to **claim 2**, *Barsheshet* discloses limitations in the parent claim.

Barsheshet is silent or deficient to the further limitation wherein the step of determining is performed at periodic intervals.

Bruckman teaches the further recited limitation above at e.g., paragraph 0066 starting on page 4.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Barsheshet* by including the above limitation.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be for monitoring latency where latency is used for load balancing. In particular, *Bruckman* cures the above-cited deficiency by providing a motivation found at e.g., paragraph 0009 on page 1. Second, there would be a reasonable expectation of success since both references teach ringed networks. Thus the references teach the above claim limitation(s).

As to **claim 3**, see similar rejection to claim 2 where the test for latency involves sending a test packet, see e.g., paragraph 0017 on page 2.

As to **claim 9**, see similar rejection to claim 2.

As to **claim 10**, see similar rejection to claim 3.

As to **claim 11**, see similar rejection to claim 3.

As to **claim 17**, see similar rejection to claim 3.

As to **claim 18**, see similar rejection to claim 3.

8. **Claims 7, 15 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2003/0103449 A1 to *Barsheshet et al.* ("*Barsheshet*") in view of "Architectural Issues for Robust Access" to *Medard, et al.* ("*Medard*").

As such to **claim** 7, *Barsheshet* discloses limitations in the parent claim

Barsheshet is silent or deficient to the further limitation of using first and second wavelengths. In particular, *Barsheshet* teaches using first and second rings.

Medard teaches the further recited limitation above at e.g., left-hand column on page 117. In particular, *Medard* teaches that rings such as RPR can be either WDM OR DWDM where a ring is a wavelength.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Barsheshet* by including the above limitation.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to use wavelengths in order to decrease the dependency on a physical topology. In particular, *Bruckman* cures the above-cited deficiency by teaching that WDM and DWDM implement rings using wavelengths. Second, there would be a reasonable expectation of success since both references teach ringed networks. Thus the references teach the above claim limitation(s).

As to **claim 15**, see similar rejection to claim 7.

As to **claim 23**, see similar rejection to claim 7.

9. **Claims 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2003/0103449 A1 to *Barsheshet et al.* ("*Barsheshet*") in view of "Data and Computer Communications" to *Stallings*.

As such to **claims 19 and 20**, *Barsheshet* discloses limitations in the parent claim.

Barsheshet is silent or deficient to the further limitation of the type of signaling used for control information. In particular, *Barsheshet* discloses that the constraint information is sent over the ring but may not necessarily teach how the information is sent.

Stallings teaches the further recited limitation above at e.g., Table 8.1 on page 249. In particular, *Stallings* teaches that control signals can be sent using either in-hand of out-of-band signaling.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Barsheshet* by including the above limitation.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to use in-band signaling if implementing a simple technique and to use out-of-band signaling to provide continuous supervision. In particular, *Stallings* cures the above-cited deficiency by providing a motivation as summarized in Table 8.1 on page 249. Thus the references teach the above claim limitation(s).

Allowable Subject Matter

10. **Claims 6, 14 and 22** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2616

DWF

3/30/04
DERRICK FERRIS
PATENT EXAMINER